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June 3, 1981

Mr. Marvin P. Barnes
General Manager
Silver State Mining, Inc.
444 So. State St. No. 305
Salt Lake City, Utah 84111

RE: Mine Plan Adequacy Review
Silver State Mining, Inc.
Silver Creek Mining
ACT/043/006

Dear Mr. Barnes:

Attached please find the review for adequacy for compliance with the Utah Mined Land Reclamation Act. The Division of Oil, Gas and Mining cannot present your plan to the Board of Oil, Gas and Mining for tentative approval until you have corrected your submittal to include the information per the attached review.

If you have any questions please contact Mr. Leland C. Spencer of my staff.

Sincerely,

Cleon B. Feight
Cleon B. Feight
Director

CBF/lis

attachments

MINE PLAN ADEQUACY REVIEW

SILVER STATE MINING, INCORPORATED SILVER CREEK TAILINGS Summit County, Utah

LEGAL AND FINANCIAL INFORMATION

Pursuant to Rule M-3 and Mine Reclamation Form 1, item 5, "Mine Location." The applicant lists Section 14, 15 and 22 of T. 1 S., R. 4 E., SLBM as the location of the proposed operation. The location map delineates the Silver Creek Tailings in red as partially being in Section 10. Does the applicant wish to mine the tailings in Section 10?

Pursuant to Rule M-3 and Mine Reclamation Form 1, item 9, "The Owners of Record of the Land Affected," the applicant has delineated on the location map by shading an area for the Silver Creek Technical Center. Is all of this land under the control of Stanley Pace or Silver Creek Investors? In addition, the applicant should provide documentation that the shaded area is under the control of Stanley Pace et al., for all minerals to be mined. An appropriate way to verify this information is to provide documents which show this ownership and the lease agreements between Stanley Pace et. al. and Silver State Mining, Inc..

Pursuant to Rule M-3, Mine Reclamation Form 1, item 12, the applicant should provide (as suggested above) the documents which give him the legal right to enter and conduct operations.

Pursuant to Rule M-3 and Mine Reclamation Form 1, item 13, the applicant indicates the total acreage to be affected as 220 acres. The Division verified acreage from a map titled Silver Creek Tailings Project Plant Site Layout. This map shows, within the fenced area, approximately 51 acres to be affected. However, the six-foot fence does not extend around the additional stacking areas indicated on the map. It appears that the permit applicant wishes to permit the nine stacking areas shown on this map. On a map entitled, Silver Tailings Sampling Grid System, the tailings cover approximately 133 acres, not including where the county road passes through the tailings. The applicant should delineate on a map, the boundaries encompassing all mining and show whether he intends to mine under the two areas shown on the project map general layout where the county road intersects the tailings.

Pursuant to Rule M-3 and Mine Reclamation Form 1, item 14, the applicant has listed the principle executives, officers and partners of Silver State Mining, Incorporated. The applicant should provide a copy of the appropriate document to show that Silver State Mining is licensed to do business in the State of Utah.

Pursuant to Mine Reclamation Form 1, item 16, the applicant has indicated that he wishes that the mine sequence portion of his plan be kept confidential. Please note that in accordance with Section 40-8-13(2), the Mined Land Reclamation Act, that only information relating to the location, size or nature of the deposit and which is marked confidential by the operator

shall be protected as confidential. The map showing Silver Tailings Sampling Grid System would be held confidential by the Division. Due to some of the information needed to assess the environmental impacts involved in the operators mining plan, the Division recommends the applicant carefully select those portions which he wishes to be held confidential. It is not known whether those items on the following pages addressing item 11(a) or beginning with construction phase are to be held confidential. It is difficult for the Division to present the operator's plan to the Board of Oil, Gas and Mining for approval if all of this material is held confidential.

The applicant must demonstrate that any water used in the operation is subject to a valid existing water right approved by the Utah State Division of Water Rights. Any point of diversion of a water right must be approved by the Division of Water Rights.

MAPS AND PLAN

Pursuant to Rule M-3(1), the applicant must provide a true copy, map or plat. All maps should show a scale, a legend and legal boundaries. The general layout map provided by the applicant does not show the extent of the tailings to the west. The applicant should show the county road right-of-way on these maps and any other right-of-ways across the properties. The applicant should delineate on the maps the disturbed areas so that only those lands affected will be subject to the reclamation bond. It appears that possibly less than 220 acres may actually be disturbed.

Pursuant to Rule M-3(1)(c), the applicant should show on a map, using a color code or other legend, the proposed sequence of removing tailings during the operation in the tailings area, and the sequence of stacking in the stacking area. In addition, the applicant should provide maps showing the proposed contour following mining in the stacking area and the tailings area. Pursuant to Rule M-3(1)(b), the applicant should indicate on all maps, the names and locations of lakes, rivers, streams, creeks, irrigation canals, etc. In addition, the applicant should show the proposed transmission line intended to be installed for this operation.

Pursuant to Rule M-3(1)(e), "Drainage Plan," the applicant should show topsoil stockpiles and the directional flow of water indicated by arrows during mining and following reclamation. The applicant has mentioned that the stream will be diverted around the tailings so that tailings can drain and then be worked. The applicant should show on his layout map these constructed drainage ways and diversions and these plans must be approved by the Utah State Division of Water Rights.

Pursuant to Rule M-3(1)(f), the applicant should show drill hole locations, including status, depth, and thickness; and he should indicate any water bearing strata, toxic materials and useable growth medium (topsoil). It is of particular importance to indicate the water tables, if known, in the stacking area.

Pursuant to Rule M-3(1)(g), the applicant has failed to show the location of the topsoil stockpiles on either side of the stacking area as indicated during the narrative discussion in the plan.

EFFLUENT CONTROL

Pursuant to Rule M-3(1)(h), the applicant has indicated that there will be total containment of any cyanide sodium leaching components. The applicant should further discuss, in detail, the procedures to be used to totally contain these solutions. The applicant should indicate whether the total area under the stacking will be laid with PVC and then how the PVC would be protected from stackers or vehicles on top of it. The applicant must show that the PVC is strong enough and chemically resilient for its intended use. The applicant will be required to have approval from the Utah State Department of Health, Bureau of Water Pollution Control for containment and neutralization of the cyanide leaching solutions.

ok The applicant should show how he intends to test to be sure that the tailings are neutralized using the sodium hyperchlorite solution to insure complete detoxification. In addition, the applicant should supply calculations for the appropriate precipitation event to insure that such storm runoff would not overflow the collection pond or wash cyanide leaching solutions into the surrounding environment. The applicant should also provide cross sections in the stacking area to show the flow of the leaching solution. The applicant must show that these solutions will be gathered and collected in the pond. The applicant should provide the Division with the total volume of sodium cyanide leaching solution in the system at any time.

ok The applicant must monitor the ground water during leaching operations to demonstrate zero discharge. The applicant must provide a monitoring plan for the Bureau of Water Pollution Control and the Division of Oil, Gas and Mining.

The sedimentation pond must be designed to contain the runoff volume from the 50 year-24 hour precipitation event and be designed to anticipate the volume of runoff from the 50 year snowpack. Diversions used to by-pass runoff from the pond watershed must be compatible with these design specifications. The applicants designs for sedimentation ponds, dams or impoundments must be submitted to the Division of Water Rights, Dam Safety for approval.

OPERATION PLAN

Pursuant to Rule M-3(3) and Mine Reclamation Form 1, item 7, the applicant should indicate the sequence for removing tailings from the tailings area. The applicant should show cross sections in the stacking area depicting the configuration and emplacement of PVC as the stacks progress upward in 15-foot lifts.

Pursuant to Mine Reclamation Form 2, item 11(b), the applicant should provide a letter from the authority over the county road showing concurrence to use paddle wheel scrapers along this county road to haul tailings to the stacking area. In addition, should the applicant wish to remove the tailings where the county road crosses the tailings, the applicant should provide documentation from the county road authority showing concurrence for reconstruction of the county road through this area.

Pursuant to Mine Reclamation Form 2, item 11(c), the applicant indicates that he will clear trees and bushes into wind rows along the tailings. The applicant should further discuss what will become of this material following removal of the tailings. Pursuant to Rule M-3(2)(c) and Mine Reclamation Form 2, item 11(b), the applicant should indicate the methods for removal and the total amount of topsoil removed. The applicant should indicate on a map where the topsoil is to be stacked and discuss the methods for topsoil protection until topsoil is redistributed.

Pursuant to Rule M-10(1)(4), the applicant should indicate with regard to the Soil Conservation Service survey, how much topsoil is available in this area to remove.

Pursuant to Rule M-3(2)(c) and Mine Reclamation Form 2, item 11(e), the applicant should provide cross sections and a geotechnical analysis showing that the final configuration of the tailings will be stable and erosion control will be accomplished following reclamation.

Pursuant to Mine Reclamation Form 2, item 11, the applicant has indicated that the refuse following neutralization will be nonacid-nontoxic material. The applicant should provide the Division with the projected analysis of this material after leaching and neutralization.

Pursuant to Rule M-2(k)(6), "toxic" means any chemical or biological or adverse characteristic of the material involved which could reasonably be expected to negatively affect ecological or hydrological systems or could be hazardous to the public safety and welfare.

Pursuant to Rule M-10(6), the applicant shall indicate, as above, the details of isolation practices to contain all cyanide leachate solutions. In addition, the applicant should address what will become of the cyanide leachate solution following abandonment. The applicant should indicate whether this material will be neutralized or hauled away and how it will be neutralized or hauled away and how it will be disposed.

RECLAMATION PLAN

Pursuant to Rule M-3(2)(b), the applicant has indicated the potential land-use of the tailings area as open spaces within a research park indicated as a "no building" zone. Does this "no building" zone apply to both the tailings area or the stacking area? The applicant should provide documentation of the County Zoning Authority and indicate approval of the County for building in the tailings area.

Pursuant to Rule M-10(2), "Public Safety and Welfare," the applicant should address posting the area with appropriate warning signs in location where public access to operations is readily available.

Pursuant to Mine Reclamation Form 2, the applicant should provide typical cross sections of the regraded areas in both the tailings area and the stacking area showing any terracing as indicated on 200 foot centers.

Pursuant to Mine Reclamation Form 2(1), the applicant should describe the probable stability of the reclaimed fill material.

Pursuant to Rule MR-2(f) and Rule M-3(e), the applicant should show drainages by use of arrows for overland flow during operations as well as after. The applicant should address compliance with Rule M-3(11) "Sediment Control," that the mining operations shall be conducted in a manner that such sediment for lands disturbed in mining and reclamation activities is adequately controlled. The degree of sediment control shall be appropriate for the site specific and regional conditions in topography, soils, drainage, water quality or other characteristics.

Pursuant to Rule M-10, item 12, the applicant should describe the methods for testing the soil which will support vegetation upon reclamation.

Pursuant to Rule M-3(2)(e), the applicant has not shown a planting program for the tailings area.

Pursuant to Mine Reclamation Form 2, item 3, and Rule M-10 (12), "Revegetation", the applicant should provide the Division with plans for revegetation, to show that the standards will be accomplished. The applicant may need to establish test plots to be used during mining so that the best revegetation methods upon reclamation can be determined.

Pursuant to Mine Reclamation Form 2, item 6, the applicant should describe maintenance including irrigation, frequency of inspections, and monitoring. The applicant should discuss procedures to determine measures to be taken during revegetation until success of revegetation (21% cover or crown density) is secured.

Pursuant to Mine Reclamation Form 2, item 5, the applicant should describe how irrigation will be accomplished, how maintenance inspections and frequency will be performed.

Pursuant to Rule M-3(2)(f), the applicant should provide a reclamation schedule showing the estimated time for construction, the estimated time for any interim reclamation and most importantly, a time table for the accomplishment of each major step in reclamation. If subdivision development is used as reclamation, the applicant must indicate a time table to show subdivision development is timely.

Pursuant to Rule M-5, the applicant should supply the Division with a reclamation surety estimate. The Division has attached a form for this estimate. The estimate should be based on the reclamation plans including clean up and removal of structures, grading and contouring, stabilization, all labor, safety and fencing and reclamation monitoring and inspection. In addition, the applicant should provide the Division with the type of the surety pursuant to Rule M-5, ie., bond, contract, letter of credit, escrow, etc.